

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 **Claim 1 (currently amended):** An induction heater
2 comprising an induction heating coil which produces a high-
3 frequency magnetic field to heat an object to be heated
4 ~~(hereinafter, object)~~, an inverter circuit which supplies a
5 high-frequency current to said induction heating coil, an
6 output detection section for detecting the magnitude of the
7 output of said inverter circuit, a control section for
8 controlling the output of said inverter circuit in response
9 to the output of said output detection section, a setting
10 input section for setting a target output to be controlled by
11 said control section, a first movement detection section for
12 detecting a movement of said object, and a storage section
13 for storing a control value output by said control section or
14 an output value of said output detection section before said
15 first movement detection section detects the movement of said
16 object, wherein
17 said control section has a reach control mode where the
18 output of said inverter circuit is increased from a low
19 output to said target output gradually, a stable control mode
20 where said inverter circuit is controlled so that the output
21 of said inverter circuit agrees with said target output, and
22 a first output mode where a control value derived from the
23 control value or the output value of said output detection

24 section stored in said storage section is output, or an
25 output value derived from the control value or the output
26 value of said output detection section stored in said storage
27 section is set as a new target output, and said inverter
28 circuit is controlled so that the output of said inverter
29 circuit agrees with the new target output, and

30 when said first movement detection section detects a
31 movement of said object, said control section shifts to said
32 first output mode.

1 **Claim 2 (original):** An induction heater in accordance
2 with claim 1, wherein, when a predetermined time period
3 elapses in said first output mode, said control section
4 shifts to said reach control mode.

1 **Claim 3 (original):** An induction heater in accordance
2 with claim 1, wherein, in said first output mode where said
3 control section outputs the control value derived from the
4 control value or the output value of said output detection
5 section stored in said storage section, when the difference
6 between the output value of said output detection section
7 stored in said storage section at the previous time and the
8 output value of said output detection section newly stored
9 therein is within a predetermined range, and a predetermined
10 time period has elapsed since the shift to said first output
11 mode, said control section changes said target output value

12 set by said setting input section into the value derived
13 based on the output value of said output detection section
14 stored in said storage section, or
15 in said first output mode where said control section
16 sets the output value derived from the control value or the
17 output value of said output detection section stored in said
18 storage section as the new target output and controls said
19 inverter circuit so that the output of said inverter circuit
20 agrees with the new target output, when the difference
21 between the control value or the output value of said output
22 detection section stored in said storage section at the
23 previous time, and the control value or the output value of
24 said output detection section newly stored in said storage
25 section is within a predetermined range, and a predetermined
26 time period has elapsed since the shift to said first output
27 mode, said target output value set by said setting input
28 section is changed into the value derived based on the
29 control value or the output value of said output detection
30 section stored in said storage section.

1 **Claim 4 (previously presented):** An induction heater in
2 accordance with claim 3, having a setting display section for
3 displaying said target output value set by said setting input
4 section, wherein said setting display section displays said
5 target output value set by said setting input section in
6 response to the control value output by said control section

7 or the output value of said output detection section which
8 have been stored in said storage section.

1 **Claim 5 (previously presented):** An induction heater in
2 accordance with claim 1, having a second movement detection
3 section which determines that said object has slipped to move
4 when said first movement detection section detects movements
5 of said object successively in said first output mode,
6 wherein, when said second movement detection section detects
7 the movement of said object, said control section changes the
8 output of said inverter circuit in said first output mode
9 into a value lower than before in order to stop the slippage
10 of said object.

1 **Claim 6 (original):** An induction heater in accordance
2 with claim 5, wherein, in lowering the output of said
3 inverter circuit in said first output mode, said control
4 section gradually reduces the output.

1 **Claim 7 (original):** An induction heater in accordance
2 with claim 1 or 5, wherein when said target output value set
3 by said setting input section exceeds a predetermined value,
4 said control section corrects a threshold value with which
5 said first movement detection section or said second movement
6 detection section determines that said object has moved with
7 a predetermined value.

1 **Claim 8 (original):** An induction heater in accordance
2 with claim 3, wherein when the value for use in changing said
3 target output value set by said setting input section, which
4 is derived based on the control value output by said control
5 section or the output value of said output detection section
6 which have been stored in said storage section is less than
7 a predetermined value, said control section stops heating.

1 **Claim 9 (original):** An induction heater in accordance
2 with claim 1, wherein when the difference between the set
3 output value and the output value of said output detection
4 section is within a predetermined range in said stable
5 control mode, said control section fixes a control value as
6 a second output mode for at least a predetermined time
7 period.

1 **Claim 10 (original):** An induction heater in accordance
2 with claim 1, having a movement state detection section for
3 determining whether said object has been moved by the outside
4 force or the movement thereof has been caused by the
5 repelling magnetic field in said stable control mode, wherein
6 when said movement state detection section determines that
7 the movement thereof has been caused by the repelling
8 magnetic field, the shift to said first output mode is made.

1 **Claim 11 (original):** An induction heater in accordance
2 with claim 10, wherein, in said stable control mode,
3 according to whether or not the periods of the change in the
4 output value of said output detection section, the control
5 value of said control section, or the weight of said object
6 are within a predetermined range, it is checked whether the
7 movement of said object has been caused by the repelling
8 magnetic field or said object has been moved by the outside
9 force.

1 **Claim 12 (previously presented):** An induction heater in
2 accordance with claim 1, further having a third movement
3 detection section for detecting a movement in which said
4 object moves away from said induction heating coil based on
5 the fact that said control section has increased the control
6 value continuously so as to increase the output of said
7 inverter circuit in said stable control mode, wherein when
8 said third movement detection section detects the movement of
9 said object, the shift to said first output mode is made so
10 that said movement is stopped.

1 **Claim 13 (original):** An induction heater in accordance
2 with claim 1 or claim 10, wherein when shifting from said
3 reach control mode or said stable control mode to said first
4 output mode, said control section outputs a correction value
5 obtained by correcting the control value stored in said

6 storage section with a first correction value or a correction
7 value such that the output value obtained by correcting the
8 output value of said output detection section stored in said
9 storage section with a first correction value can be gained,
10 whereas when shifting from said first output mode to said
11 reach control mode, said control section outputs a control
12 value obtained by correcting the control value stored in said
13 storage section with a second correction value or a
14 correction value such that the output value obtained by
15 correcting the output value of said output detection section
16 stored in said storage section with a second correction value
17 can be gained, and said first correction value is set greater
18 than said second correction value.

1 **Claim 14 (original):** An induction heater in accordance
2 with claim 1 or claim 5, wherein in the case where the set
3 target output value is greater than a predetermined value,
4 said control section does not lower the output even when said
5 first movement detection section or said second movement
6 detection section detects the movement of said object.

1 **Claim 15 (original):** An induction heater comprising an
2 inverter including an induction heating coil which produces
3 a high-frequency magnetic field to heat an object, a control
4 section for controlling the output of said inverter, and a
5 movement detection section which detects a state of operation

6 of said inverter or a state of said object until the output
7 of said induction heating coil increases gradually from a low
8 output to a predetermined output to detect a movement of said
9 object, wherein

10 when said movement detection section performs the
11 movement detection operation for detecting the movement of
12 said object, said control section performs the output
13 limiting operation for limiting the output of said induction
14 heating coil to a value lower than the value when the
15 movement thereof has been detected or stopping the heating,
16 afterwards, repeats at least once the process of canceling
17 said output limiting operation, increasing the output
18 gradually again, performing said movement detection
19 operation, and performing said output limiting operation, and
20 when detecting that said movement detection operation is
21 repeated with approximately the same output changes, said
22 control section determines that the movement of said object
23 has been caused by the high-frequency magnetic field produced
24 by said induction heating coil, thereby limiting the output
25 of said induction heating coil thereafter to the output lower
26 than the output when said movement detection section has
27 detected the movement of said object to carry out heating.

1 **Claim 16 (original):** An induction heater in accordance
2 with claim 15, wherein said control section samples the
3 output values of said inverter, the control values output by

4 said control section, or the weight of said object when said
5 movement detection section detected a movement of said object
6 a plurality of times, and based on a plurality of values
7 obtained through the sampling, determines whether or not the
8 movement of said object has been caused by the high-frequency
9 magnetic field produced by said induction heating coil.

1 **Claim 17 (original):** An induction heater in accordance
2 with claim 16, wherein said control section compares a
3 plurality of values obtained through sampling or performs the
4 calculation thereamong, and when determining that said
5 plurality of values are approximately the same, said control
6 section determines that said object has been moved by the
7 high-frequency magnetic field produced by said induction
8 heating coil.

1 **Claim 18 (original):** An induction heater in accordance
2 with claim 15, wherein said control section detects the time
3 required for the repetition of said movement detection
4 operation and, according to the change of the time,
5 determines whether or not a movement of said object has been
6 caused by the high-frequency magnetic field produced by said
7 induction heating coil.

1 **Claim 19 (original):** An induction heater in accordance
2 with claim 18, wherein said control section measures the

3 repetition period of said movement detection operation a
4 plurality of times, compares a plurality of values obtained
5 by measurement or performs the calculation thereamong, and
6 when a plurality of values are approximately the same, said
7 control section determines that said object has been moved by
8 the high-frequency magnetic field produced by said induction
9 heating coil.

1 **Claim 20 (original):** An induction heater in accordance
2 with claim 15, wherein when detecting that the movement of
3 said object has been caused by the user operation after
4 having performed the output limiting operation based on the
5 result of the detection done by said movement detection
6 section, said control section cancels said output limiting
7 operation to increase the output of said induction heating
8 coil to a predetermined output.

1 **Claim 21 (original):** An induction heater in accordance
2 with claim 15, having a display section for providing a
3 display corresponding to the output set by a user, wherein
4 even when said control section starts the output limiting
5 operation based on the result of the detection done by said
6 movement detection section, said display section maintains
7 the display corresponding to said set output, whereas after
8 determining that the movement of said object has been caused
9 by the high-frequency magnetic field produced by said

10 induction heating coil, said control section reduces the
11 output to be displayed to the output lower than the displayed
12 output corresponding to said output.

1 **Claim 22 (original):** An induction heater in accordance
2 with claim 15, wherein according to the change of the output
3 of said inverter, the control value output by said control
4 section or the weight of said object with time, said movement
5 detection section detects a movement of said object resulting
6 from the high-frequency magnetic field produced by said
7 induction heating coil.

1 **Claim 23 (original):** An induction heater comprising:
2 an induction heating coil which produces a high-
3 frequency magnetic field to heat an object;
4 an inverter circuit which supplies a high-frequency
5 current to said induction heating coil;
6 an input section for making a setting of the heating;
7 a movement detection section for detecting a movement of
8 said object; and
9 a control section which controls the output of said
10 inverter circuit, and when said movement detection section
11 detects a movement of said object, performs the limiting
12 operation to stop or limit the output of said inverter
13 circuit, wherein

14 according to the settings at said input section, the
15 detection sensitivity of said movement detection section is
16 decreased or the detection thereof is stopped, or said
17 limiting operation of said control section is weakened or is
18 not performed.

1 **Claim 24 (original):** An induction heater in accordance
2 with claim 23, wherein said input section has a heating
3 output setting section for setting heating output, and
4 according to the heating output set at said heating output
5 setting section, the detection sensitivity of said movement
6 detection section is decreased or the detection thereof is
7 stopped, or said limiting operation of said control section
8 is weakened or is not performed.

1 **Claim 25 (original):** An induction heater in accordance
2 with claim 24, wherein when the set value of the heating
3 output at said heating output setting section becomes equal
4 to or greater than a predetermined value, the detection
5 sensitivity of said movement detection section is decreased
6 or the detection thereof is stopped, or said limiting
7 operation of said control section is weakened or is not
8 performed.

1 **Claim 26 (original):** An induction heater in accordance
2 with claim 23, wherein when said movement detection section

3 detects a movement of a load, according to the settings of
4 said input section, selection between the continuation of the
5 heating output and the stop thereof is made.

1 **Claim 27 (original):** An induction heater in accordance
2 with claim 23, wherein when a setting section which said
3 input section has in addition to said heating output setting
4 section is used, the detection sensitivity of said movement
5 detection section is decreased or the detection thereof is
6 stopped, or said limiting operation of said control section
7 is weakened or is not performed.

1 **Claim 28 (original):** An induction heater in accordance
2 with claim 23, wherein when a change input section provided
3 independently in said input section is used, the detection
4 sensitivity of said movement detection section is decreased
5 or the detection thereof is stopped, or said limiting
6 operation of said control section is weakened or is not
7 performed.

1 **Claim 29 (original):** An induction heater in accordance
2 with claim 28, wherein said change input section has a fry
3 cooking selection section for carrying out fry cooking, and
4 when the fry cooking is selected, the detection sensitivity
5 of said movement detection section is decreased or the

6 detection thereof is stopped, or said limiting operation of
7 said control section is weakened or is not performed.

1 **Claim 30 (original):** An induction heater comprising:
2 an induction heating coil which produces a high-
3 frequency magnetic field to heat an object to be heated;
4 an inverter circuit which supplies a high-frequency
5 current to said induction heating coil;
6 an output detection section for detecting the magnitude
7 of the output of said inverter circuit;
8 a movement detection section for detecting a movement of
9 said object;
10 a control section for controlling the output of said
11 inverter circuit in response to the output of said output
12 detection section and the output of said movement detection
13 section; and
14 a movement detection stop input section through which a
15 user inputs a stop command to stop the detection operation of
16 said movement detection section or to make said control
17 section stop controlling the output in response to the output
18 of said movement detection section.

1 **Claim 31 (previously presented):** An induction heater
2 comprising:
3 an induction heating coil which produces a high-
4 frequency magnetic field to heat an object to be heated;

5 an inverter circuit which supplies a high-frequency
6 current to said induction heating coil;

7 an output detection section for detecting the magnitude
8 of the output of said inverter circuit;

9 a movement detection section for detecting a movement of
10 said object;

11 a control section for controlling the output of said
12 inverter circuit in response to the output of said output
13 detection section and the output of said movement detection
14 section;

15 a movement detection stop input section for inputting a
16 stop command to stop the detection operation of said movement
17 detection section or to make said control section stop
18 controlling the output in response to the output of said
19 movement detection section; and

20 a first timer section which starts timing in association
21 with the input operation to said movement detection stop
22 input section, wherein

23 until a predetermined time period elapses after said
24 first timer section starts timing, said control section
25 performs control regardless of whether said object has moved
26 or not.

1 **Claim 32 (original):** An induction heater comprising:

2 an induction heating coil which produces a high-
3 frequency magnetic field to heat an object;

4 an inverter circuit which supplies a high-frequency
5 current to said induction heating coil;

6 an output detection section for detecting the magnitude
7 of the output of said inverter circuit;

8 a movement detection section for detecting a movement of
9 said object;

10 a control section for controlling the output of said
11 inverter circuit in response to the output of said output
12 detection section and the output of said movement detection
13 section; and

14 an output fixation input section for inputting an output
15 fixation command, wherein

16 when said output fixation command is input, said control
17 section fixes the output of said inverter circuit regardless
18 of whether said object has moved or not.

1 **Claim 33 (original):** An induction heater in accordance
2 with claim 32, having a second timer section which starts
3 timing in association with the input of said output fixation
4 command to said output fixation input section, wherein when
5 the time measured by said second timer section becomes equal
6 to or longer than a predetermined time period, said control
7 section cancels the fixation of the output of said inverter
8 circuit.

1 **Claim 34 (original):** An induction heater in accordance
2 with claim 32, wherein said control section fixes the output
3 of said inverter circuit only while said output fixation
4 input section inputs said output fixation command.

1 **Claim 35 (original):** An induction heater in accordance
2 with claim 32 having an fixed output setting section for
3 adjusting the output of said inverter circuit to be fixed at
4 said output fixation input section.